

Amendments to the Specification:

Please amend the specification as follows:

Please amend paragraph 24 of the specification as follows:

[0024] The present invention presents layered lithium nickel manganese oxide cathode materials for lithium secondary batteries such as: (1) cathode materials doped with fluorine on oxygen sites to reduce impedance and to improve cycling stability at high temperature as well as at room temperature; (2) cathode materials doped with various metal ions on transition metal site to stabilize layered structure, suppress cation mixing and, consequently, improve electrochemical properties; lithium, cobalt, magnesium, zinc, aluminum, gallium, boron, zirconium, and titanium ions were chosen for the latter purposes; and (3) cathode materials surface-coated to improve cycling/power performance and thermal safety, wherein the coating element of the coating material source is at least one element selected from the group consisting of Al, Bi, Ga, Ge, In, Mg, Pb, Si, Sn, Ti, Tl, Zn, Zr. Either a solid-state reaction method or an aqueous solution method or a sol-gel method may be employed for the preparation of the compounds $\text{Li}_{1+x}\text{Ni}_\alpha\text{Mn}_\beta\text{Co}_\gamma\text{M}'_\delta\text{O}_{2-z}\text{F}_z$ with the value $\text{M}'=\text{Mg,Zn,Al,Ga,B,Zr,Ti}$ and in another embodiment $\text{Li}_{1+x}\text{Ni}_\alpha\text{Mn}_\beta\text{Co}_\gamma\text{M}'_\delta\text{O}_{2-z}\text{X}_z$ ($\text{M}'=\text{Mg,Zn,Al,Ga,B,Zr,Ti}$; $\text{X}=\text{F,S,Cl,I}$).